

(Mis)perceptions of ethnic group size and consequences for community expectations and cooperation with law enforcement

Article (Accepted Version)

Miles-Johnson, Toby, Fay-Ramirez, Suzanna and Wiedlitzka, Susann (2018) (Mis)perceptions of ethnic group size and consequences for community expectations and cooperation with law enforcement. *Race and Justice*, 8 (2). pp. 99-125. ISSN 2153-3687

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(Mis)perceptions of Ethnic Group Size and Consequences for Community Expectations and Cooperation with Law Enforcement

Abstract

The changing composition of race and ethnic group size has been noted for Western nations over the last 15 years. Analysis of this change has linked fear of crime and attitudes towards immigrants and prejudice. Changes in ethnic composition are associated with movement of white residents out of traditionally white communities, rising ethnic tension as the ethnic mix shifts, and a heightened sense of injustice regarding the justice system. (Mis)perceptions of ethnic groups size shape attitudes towards minority groups, as well as policy, practice, and individual behaviour in the context of the community. This study seeks to understand the extent of such misperceptions in the Australian context and whether misperceptions of race and ethnic composition are associated with beliefs and attitudes towards formal and informal social control. Utilizing Blalock's (1967) racial threat hypothesis, this study analyses whether *perceived* relative ethnic group size is associated with self-reported willingness to cooperate with police as a way to minimize perceived threat. Findings suggest that respondents overestimate the size of minority populations while underestimating the majority white composition, and that these misperceived distortions in ethnic group size have consequences for informal and formal social control.

Introduction

Global attention to the movement and treatment of immigrants and refugees, their vulnerability in the host country as well as the perceived threat they may pose to safety and security has renewed focus on how ethnic and religious minorities are perceived and how those attitudes shape the lives of individuals and communities. Growth in ethnic minority group size has previously been linked to increased fear of crime, negative attitudes towards immigrants, racial and religious intolerance, and increases in criminal justice attitudes (see Alba, Nee & Nee, 2005; Posick, Rocque, & McDevitt, 2013; Warren, Stewart, Tomaskovic-Devey & Gertz, 2012). However, average citizens are not always able to accurately perceive changes in the size of population groups

(Sigelman & Niemi, 2001), yet their perceptions, or misperceptions, have consequences for attitudes and actions. This means that the misperception of ethnic group sizes have just as real consequences as the actual shift in population size. These misperceptions shape attitudes towards minority groups and therefore policy, practice, and individual behaviour in the context of their community. This study seeks to examine the extent to which a sample of Australian residents, misperceive ethnic and religious minority groups. We then further examine whether these misperceptions have consequences for perceptions of informal social control within their community, as well as willingness to cooperate with police.

We utilize Blalock's racial threat hypothesis (1967) as a framework for understanding the consequences of misperceived ethnic group size. The racial threat hypothesis suggests that as the size of a racial and ethnic minority group increases those who are a part of the white majority will use their power and privilege to implement state control over growing minority populations (Stolzenberg, D'Alessio & Eitle, 2004). Feldmeyer, Warren, Siennick, and Neptune (2015) argue that this is typically enacted through the criminal justice system by instituting legal controls and other measures to protect a dominant status. Blalock (1967) initially focused on the impact of economic and political threat generated from increasing minority population size which has led to a focus on macro level outcomes such as police and criminal justice system expenditure, police force size, and police resource allocation in relation to the relative population size of ethnic minority groups. As such, it is still unclear what micro level associations help explain the relationship between relative population size and the use of formal social control (Dollar, 2014). We specifically seek to understand if the perception of increasing ethnic minority size is associated with increased willingness to cooperate with formal authorities such as the police (formal social control), and whether or not such perceptions influence the public's ability to intervene in community problems (informal social control).

Though Blalock's (1967) thesis has been linked to the unique racialized history of the USA (Kent & Jacobs, 2004), studies outside of the USA have linked negative perceptions of ethnic and religious minorities to fear of crime, terrorism, and economic hardship (see Wheelock, Semukhina &

Demidov, 2011). By examining the link between misperceptions of ethnic group size and beliefs about informal and formal social control outside of the USA, a greater understanding of the racial threat perspective and associated social control practices can be formed. Situating racial threat theory among the emerging dynamics of minority population change, and how this has dominated political platforms and criminal justice policy around the world can also allow a deeper understanding of how majority groups perceive minority group members and the interrelated power imbalances which occur.

Similar to the USA, Australia has a very diverse population of ethnic and religious minorities and has experienced significant increases in minority populations over the last 20 years (Oliveira & Murphy, 2015). This study seeks to understand the extent to which Australian residents misperceive race and ethnic composition and the consequences for informal and formal social control. We seek to extend this body of work in a number of ways. First, we examine whether perceptions of ethnic composition are linked to increased willingness to cooperate with formal social control outside of the unique racial context of the U.S. Second, we examine the individual level (micro) associations between perceptions of ethnic minority group size and perceptions of informal and formal social control, and lastly, we utilize a *perceived* measure of ethnic group size that allows an understating of how over and underestimation of group size is associated with perceptions of social control.

The Racial Threat Framework

Blalock's (1967) racial threat hypothesis suggest that as the relative size of an ethnic minority group increases, social control practices are increasingly used by the white majority to maintain power and privilege. Blalock (1967) suggests that increases in minority populations signify to the white majority political threat, where white power is in jeopardy, economic threat, where minorities are viewed as jeopardizing job availability, and symbolic threat, where minorities are linked to increased social problems such as crime and deviance. This conflict perspective of social control has been viewed as indicative of the unique racialized history of the USA (Kent & Jacobs, 2004). Few studies have ventured to utilize a racial threat perspective to understand the growing

link between negative views of immigrant, ethnic, and religious minorities to fear of crime and terrorism. Yet this link currently dominates the political debate about immigrants, asylum seekers and the effect global change has on population composition.

Existing studies utilizing the racial threat hypothesis show strong empirical evidence for a link between the relative size of ethnic minority populations and formal social control agents. Huff and Stahura (1980) found that the percentage of black residents in U.S. suburbs is positively associated with the number of police officers employed even when no increases in crime were observed. Similarly, more recent work has seen relative increases in policing of minority groups that are positively associated with police expenditure (Holmes, Smith, Freng & Muñoz, 2008) particularly when minority groups are perceived to be associated with crime (Welch, Payne, Chiricos & Gertz, 2011). This current research has concentrated on the macro level links between objective changes in minority population size as an indicator of threat and discriminatory formal social control practices. Though Blalock (1967) and others (see Dollar, 2014) have suggested that micro level processes should be investigated to better understand the link between population change and formal social control, few studies have investigated whether actual or perceived increases in ethnic minority group size is related to increased willingness to support or cooperate with police as formal social control agents. This study seeks to fill this gap by understanding whether perceived relative ethnic group size is associated with individual willingness to engage with police as a way to minimize the perceived threat.

Actual or perceived ethnic group size may also be associated with the use of informal social control mechanisms to minimize threat. Chiricos, McEntire, and Gertz (2001) demonstrate how perceptions of racial and ethnic compositions of neighbourhoods increase fear of crime and victimisation for white residents when they live in areas also populated by blacks and Hispanics, clearly linking perceptions of minority group size to threat in the form of crime and deviance. Drakulich (2012) also finds that racial composition is associated with resident beliefs about police, neighbourhood conditions of disorder, and the capacity to exert informal social control when neighbourhood problems arise. Few studies systematically link actual or perceived minority group

size using a racial threat framework to individual perceptions of informal social control, yet it is reasonable that if perceptions of ethnic group size are linked to an increased reliance on formal social control agents and fear of crime, there may also be implications for how individuals view the capacity to exert informal social control. A notable exception is work by Lyons (2006) which tested the racial threat hypothesis as an explanation for hate crime in Chicago neighbourhoods. Lyons (2006) found that anti-black hate crime was more common in organized white communities that a) had seen an increase in black residents, and b) were traditionally organized indicating higher levels of informal social control. Examining whether perceptions of ethnic population size is associated with an awareness of the capacity to exert informal social control when problems arise is important for understanding engagement with formal social control agents (Portes, 2014).

It is worth noting that there is no agreement in the way that racial threat is measured. Existing studies have primarily relied on actual percentages of ethnic group composition at national and local levels to indicate signs of racial threat (Eitle, D'Alessio & Stolzenberg, 2002). Some studies have moved towards measuring racial threat in terms of *perceived* ethnic population increases and how these perceptions influence punitive sentencing attitudes (King & Wheelock, 2007). We, along with others (see Herda, 2010) are sceptical that survey respondents are able to reliably estimate ethnic population sizes. Furthermore, these errors in perceived group size may actually be as important for attitudes and beliefs as perceptions of group size alone. These distortions or misperceptions of ethnic group composition are therefore just as important for understanding individual level associations between perceptions of ethnic composition and perceptions of informal and formal social control.

Misperceptions and Prejudice

Work by Alba et al., (2005) systematically quantifies how the error individuals make in perceiving ethnic group size matters for related attitudes and beliefs. Using individual perceptions of minority and majority ethnic group composition in the U.S., Alba et al., (2005) show that respondents consistently overestimate the sizes of black and Hispanic ethnic groups while

underestimating the majority white composition of the American population. Furthermore, respondents with the most negative immigrant and race related attitudes gave the most distorted estimations. The work by Alba et al., (2005) is important given that it highlights the significance of perceptions even when those perceptions are distorted or incorrect.

Multiple studies around the world examined (mis)perceptions of ethnic group size. A study administered by the SVR Research Unit (2014), for example, found that around 70% of respondents overestimate the number of Muslims living in Germany. This study also suggests that women are more likely to overestimate these numbers than men and higher education decreases the misperceptions of Muslims living in Germany (SVR Research Unit, 2014). In the 2001 U.S. Census, Americans overestimated the size of blacks and Hispanics by more than twice the actual size (Carroll, 2001). Gallagher (2003) found that the U.S. population overestimates the presence of the non-white population and that a *fear of threat, status anxiety, and the effects of segregation* lead to the misperception of ethnic groups. Further, Herda (2013) found that populations in European countries also overestimate their immigrant population. Respondents with negative views towards immigrants were more likely to overestimate immigrant groups, while positive views were associated with an underestimation of immigrant group size (Herda, 2013).

Perceptions of threat by the white majority have long been connected to changes in racial and ethnic demography within Western nations (Alba et al., 2005; Posick et al., 2013; Warren et al., 2012). This has also included the institutionalisation of exclusionary barriers used by majority groups to preserve the social privileges of the dominant group (Becker, 2013; Warren et al., 2012; Bobo, 1983; Quillian, 1995). In the U.S., Australia and United Kingdom, institutionalisation of exclusionary barriers has included forms of prejudice to certain groups such as a lack of uniform treatment by police officers (Bonner, 2014; Oliveira & Murphy, 2015; Reck, 2015; XXXX, 2013a, 2013b, 2015a, 2015b) and/or an absence of fair treatment within the criminal justice system (Cherney & Murphy, 2011; Rocque, 2011; Thomas, Moak, & Walker, 2013). Such barriers also include hostility and other forms of discrimination towards growing groups of immigrant populations (Gibson, McAllister, & Swenson, 2002; Warren, 2012; Wu & Altheimer, 2013). This indicates that perceptions of ethnic

group size have real consequences for the treatment of minority groups as well as engagement with informal and formal social control.

Misperceptions and Cooperation with Police

Public cooperation with police is essential for the control of crime and disorder (Murphy & Cherney, 2011); subsequently the police rely on some form of public cooperation from all members of society in almost everything they do (Bradford, 2014). Cooperation with police, either by involving the police or by co-policing the community, is voluntary, while non-cooperation is virtually undetectable (Tyler & Jackson, 2013). According to Tyler and Jackson (2013), people's sense of duty to community and authorities can impact the decision to report crime to police. People tend to cooperate with police if they identify with and want to protect the group represented by police (Tyler & Jackson, 2013), and cooperate with others in their community when they identify with their community (Tyler & Fagan, 2008).

Researchers using a racial threat framework also report a link between ethnicity and the police as formal social control agents (Kent & Jacobs, 2004; Dollar, 2014). Acknowledging the often strained and tense relationships between ethnic minorities and police, a racial threat framework suggests that when threat is perceived via increasing minority group size the police as formal social control agents become a tool to help manage this threat by the majority ethnic group (Blalock, 1967; Dollar, 2014). Though this relationship has been empirically demonstrated through increased police expenditure (Jackson & Carroll, 1981), increased police on the street, and a higher allocation of police resources (Kent & Jacobs, 2005) there is no study that we could find that tests whether there is an association with the real or perceived increase in minority group size and an *individual's* willingness to cooperate with authorities.

Macro perspectives about ethnic group size, racial threat and increased reliance on the police would suggest that individuals who perceive an increase in the size of ethnic minority groups might also be willing to engage with the police via cooperation. However, it is still unclear under what conditions perceived increases in minority group size would increase the use of formal social

control. Parker, Stults and Rice (2005) found mixed results for increases in minority group size and arrest rates. Operating under the racial threat hypothesis that racial composition of blacks would increase black arrest rates, they instead find that black composition was negatively related to black arrest rates. Parker et al., (2005) explain this finding by suggesting that it is when the ethnic minority group becomes large, formal social control is used less often because the threat to white residents, who flee from these increasingly black neighbourhoods, are less likely to become victimized. While no study has looked at perceptions of minority group size and police cooperation, conceptualizing group size as a relative perception allows greater understanding of the amount of distortion needed to engage or disengage with police.

Misperceptions and Perceived Informal Social Control

Effective social control requires both formal and informal social control; formal responses by authorities combined with regular citizens who can be the eyes and ears on the ground for police (Sampson, 1986). Where increasing ethnic composition is associated with increasing reliance on formal social control agents, similar research has suggested that increasing ethnic group size also has consequences for informal social control (Drakulich, 2012, 2013; Quillian & Pager 2001). Putnam (2007) also suggests that ethnic diversity reduces social cohesion, trust, and the development of networks in the contemporary neighbourhood. His core argument is that ethnic diversity reduces “both in-group and out-group solidarity” (Putnam, 2007, p. 144), and ethnically diverse areas report low levels of both inter-racial and intra-racial trust.

The relationship between ethnic diversity and informal social control, however, is not as straightforward as Putnam would suggest (see Wickes, Hipp, Zahnow & Mazerolle, 2013). Other research also complicates the demography/threat/prejudice linkage between ethnic diversity and misperceptions of racial and ethnic composition of groups within communities (see Alba et al., 2005; Nadeau, Niemi & Levine, 1993; Sigelman & Niemi, 2001). Alba et al., (2005) argue that misperceptions of ethnic composition reflect a “*heightened sense of threat among members of the majority group*” (p. 902). This indicates that misperceptions of ethnic group size may have

consequences for perceptions of informal social control if this perceived threat increases fear of crime or threat in their neighbourhood.

Many studies show a strong association between overestimating the presence of minority groups and elevated reports of fear of crime (see Chiricos, Hogan, & Gertz, 1997; Quillian & Pager, 2001; Sampson, 2009; Sampson & Raudenbush, 2004; Skogan, 1995). This elevated fear of crime appears to be driven by changes in ethnic composition and has implications for the capacity of neighbourhoods to intervene in crime problems (Quillian & Pager 2001, 2010). According to Leigh (2006) and Wickes et al., (2013), ethnic diversity has a negative influence on public perceptions of trust of diverse groups due to differing values and beliefs and an underlying fear of what is different or unknown. This in turn results in an inability of people to work together to engage informal social controls which has consequences for community expectations. It also has consequences for cooperation with law enforcement agencies because cynicism of the law and police practice undermines engagement in collective actions that are necessary to socially control crime (Kirk, Papachristos, Fagan, & Tyler, 2012).

The threat posed by a perceived increase in ethnic minority groups has been linked to perceptions of informal social control; and an evaluation of the capacity of a respondent's neighbourhood to address neighbourhood crime problems (Drakulich, 2013). There is consistent evidence that suggests that individuals within neighbourhoods that are disadvantaged, have a high proportion of immigrants, and residential instability, and are less likely to have the ability to informally respond to crime problems (Sampson et al., 1997; Gibson et al., 2002; Bursik & Grasmick, 1993). Work by Drakulich (2013) also suggests that perceptions of informal social control are linked to perceptions about ethnic minorities and the danger they pose to the community. Drakulich (2013) shows that neighbourhood race and ethnic composition matters for understanding the perceptions of disorder in the community as well as the perceptions that the community has the capacity to informally respond to crime problems. Increases in minority composition tend to drive overestimations of danger, victimization and the racial stereotypes that link minorities to crime (Drakulich, 2012; Quillian & Pager, 2001; 2010).

Criminologists have suggested that estimates of ethnic group size can improve when individuals interact with and have contact with residents of a different race/ethnicity to themselves (Drakulich 2012; Quillian & Pager, 2001, 2010). Engaging with people of a different race or ethnicity acts as a source of information about race and ethnicity, this allows for the opportunity to revise negative stereotypes. Alba et al., (2005) also indicate that increased interactions with ethnic minorities may also lead to more accurate estimations of group size. Survey respondents make more accurate estimates ethnic group size at the community level, when they have day to day interactions with community members, than at the national level. However, there has been no direct test of whether interracial contact is associated with misperceptions of group size. We seek to fill this gap and in addition examine whether interracial contact helps explain estimation of formal and informal social control.

The Study

Since the late 1990s, issues regarding immigration and misperceptions of ethnic group size have resulted in numerous anti-immigrant sentiments being reported in the Australian media (Boomgaarden & Vliegenthart, 2007). Media reports indicate that there is a steadily growing, significant amount of negative feeling in the public at large towards minority group populations, and that misperceptions of ethnic group size has grown as a reaction to fear of unemployment and underemployment, with reports suggesting that 40 per cent of Australian voters believe that too many immigrants were being allowed into Australia with an unfair advantage regarding work (Boomgaarden & Vliegenthart, 2007). This view was supported by electorates on the periphery of regional urban centres, characterised by large numbers of blue-collar workers, small aboriginal populations, and high unemployment (Gibson, McAllister & Swenson, 2002). Therefore, this research seeks to understand if Australian residents also misperceive ethnic group sizes similarly to results found by Alba et al., (2005).

If these misperceptions exist, what are the characteristics of those who make these misperceptions and do these characteristics determine what direction (more or less) misperceptions

take? Given the existing literature on how diversity affects the political context of race and ethnic relations on perceptions of the community and interactions with the police, we seek to understand if these misperceptions are associated with self-reported willingness to cooperate with the police and perceptions of informal social control. Furthermore, given that the existing literature also suggests that having contact with people of a different race or ethnicity to oneself makes you better at estimating group size (Alba et al., 2005) and ameliorates the negative stereotype that is often tied to some minority groups, we also examine whether having contact with neighbours of a different race or ethnicity explains misperceptions or their association with willingness to cooperate with police and perceptions of informal social control.

Methods

The National Security and Preparedness Survey (NSPS) was designed to benchmark a wide range of social and political attitudes in a national probability sample of Australian residents. Collected in 2011, survey items included perceptions of community crime and social control, perceptions of government and police, and a wide range of measures that tap political and ethnic attitudes and identification. Furthermore, the NSPS sought to measure actions that residents take in their homes to protect them from different types of threat, interactions with others outside the home such as police, neighbours and strangers. Thus, the NSPS is a unique collection of data in which we can explore perceptions of ethnic minorities, contact with other neighbours, and anticipated actions with police.

The NSPS was collected over 2011 and 2012 using a two stage sampling strategy. First a random sample of Australian residents were contacted by telephone using Computer Assisted Telephone Interviewing (CATI) drawn from Australian white pages and asked to participate in a short phone survey about behaviours they have undertaken to keep themselves and their households safe from disaster (N=6239, response rate 34%). Following completion of the telephone survey, respondents were asked to participate in a longer survey by mail or email regarding community and police perceptions, social and political values, and attitudes towards national security in Australia. A total of 4257 survey respondents across Australia returned completed surveys. Table 1 shows the

descriptive statistics for all measures used in this study. We also utilise 2010 Australian Bureau of Statistics Census data to give us estimates of population sizes for six ethnic groups in Australia: Caucasian/White, Asian, Muslim, African, Jewish and Aboriginal/Torres Strait Islander. Demographics of the sample were compared to Australian census data to determine the representativeness of the sample to the Australian population. The demographic distribution of the NSPS sample showed similarities between the NSPS sample and the 2011 ABS Census data in items regarding marital status, education, as well as annual income. The sample of respondents overestimated the percentage of women, older respondents and homeowners in the population and underestimated minorities and foreign born residents.

Table 1 about here

Perceptions of Ethnic Groups Size

The NSPS contained a module of questions that measure respondent attitudes to race relations, immigration and diversity. We asked respondents to estimate the size (in percent) of ethnic groups in Australia.¹ Given Australia's ethnic landscape, we asked respondents to estimate the sizes of Caucasians/Whites, Asians, Muslims, and African populations². Respondents were instructed to provide their best guess without being concerned that percentages added to 100. Appendix A contains the exact wording of the survey question used in the NSPS. Following work by Alba et al., (2005), we chose to exclude respondents who provided non-usable estimates. Respondents who gave at least one estimate as 100%, at least one estimate of 0%, used the same estimate for all four groups, and respondents who did not provide estimates for all groups were excluded from the analysis. This left 3566 usable estimates.

We operationalise perceptions of ethnic group size following methods used by Alba et al., (2005). We compute logged ratios of each minority group to Caucasian/White estimates. This allows us to utilise three separate measures of ethnic group size in our analysis; logged Asian to white

¹ This question also appears on the General Social Survey (see Alba et al., 2005).

² We utilize only four of the group estimates: white/Caucasian, Asian, Muslim and African to represent older (Asian) immigrant groups and newer (Muslim and African) immigrant groups in Australia.

ratios, logged Muslim to white ratios, and logged African to White ratios. This operationalisation provides the benefit of a) allowing the measure to reflect relative group size in comparison to the majority group, and b) logged ratios reduced extreme values from overly influencing the regression analysis (Alba et al., 2005).

Police Cooperation

We follow work done by Cherney and Murphy (2011) and Tyler (2006) and measure police cooperation as a combined scale of four items that assesses willingness to cooperate and report crime to police. Police cooperation items ask respondents to indicate that if the situations arose, whether they would be very likely (5) to very unlikely (1) to *a) call the police to report a crime, b) help police find someone suspected of committing a crime by providing them with information, c) report dangerous or suspicious activity to police, and d) willingly assist the police if needed*. We use the mean score across all four items for each respondent to create a scale of police cooperation. An alpha coefficient of 0.89 indicates that this scale is reliable and valid.

Perceptions of Informal Social Control

Informal social control is defined as the perceived willingness that others in your community or neighbourhood would intervene in some way when a problem occurs (Matsueda, 2006). Perceptions of informal social control are an important component of existing and current analysis of police cooperation, mistrust and legitimacy (Drakulich & Crutchfield, 2013). In much of the current literature, informal social control is combined with a measure of perceived social cohesion and used as an aggregate measure referred to 'collective efficacy' (Sampson et al., 1997; 1999). Criminological research has consistently demonstrated a strong relationship between collective efficacy as a neighbourhood property and police cooperation (Tyler & Fagan, 2008; Warner & Rountree, 1997). Our study seeks to understand whether the error that people make in estimating ethnic group size has consequences for both perceptions of informal social control (perceptions of what others would do) and police cooperation (anticipated action with formal social control) and, thus, we utilise items that only reflect *perceptions* of others' willingness to intervene when problems occur in the

respondents' community in order to isolate how misperceptions might be associated with perceptions of informal social control.

Perceived informal social control is constructed as a scale comprised of mean responses across four items for each respondent. Items are consistent with those utilized in other criminological research measuring perceived informal social control either alone or in conjunction with social cohesion (Drakulich & Crutchfield, 2013; Sampson et al., 1997). Respondents were asked to indicate on a 5 point Likert scale from very likely (5) to very unlikely (1) whether people in their neighbourhood would intervene in four different scenarios: *a) if a group of community children were skipping school and hanging around on the street corner, b) if some children were spray painting graffiti on a local building, c) If there was a fight in front of your house and someone was being beaten or threatened, and d) if a child was showing disrespect to an adult.* An alpha score of 0.77 indicates that this scale is reliable and valid.

Contact with Neighbours of a Different Race or Ethnicity

Research indicates that individuals are more likely to hold incorrect stereotypes or more negative attitudes to racial minorities when they have limited contact with them (Emerson, Kimbro & Yancey, 2002). Alba et al., (2005) found that respondents were more likely to give less inflated estimates of ethnic group size when they lived in urban areas, where there is greater ethnic diversity, as opposed to rural areas. This relationship was not further tested by Alba et al., (2005), but may indicate that more contact with ethnic minorities, which is more likely in urban rather than rural areas, may contribute to more accurate perceptions. By measuring whether respondents have frequent contact with people of a different race or ethnic identity to themselves, we are able to capture if exposure and contact with others help to understand the relationship between misperceptions of ethnic group size, perceptions of informal social control and self-reported police cooperation.

To measure the degree of interaction that respondents have with those of a different race or ethnic identity to themselves, we utilise items that ask about acts of neighbourly exchange with

ethnically different neighbours. Respondents were asked how often (never, sometime or often) they *a) watched a neighbour's home while they are away, b) borrowed small items (milk, sugar) from a neighbour, c) had dinner or lunch with a neighbour, d) helped a neighbour with a problem, e) asked a neighbour about personal things such as job opening or child rearing, f) stopped to chat or say hello.*

Respondents were asked these questions twice, first by asking if they had done these things with their neighbours in general, and then by asking if they had done these things with a neighbour of a different race or ethnicity. Only responses to the second question regarding neighbourly exchange with ethnically different neighbours were used to create the race contact index. The mean score across these six items regarding neighbourly exchange with ethnically different neighbours was used for each respondent and had an alpha of 0.85.

Ethnic Identification

Alba et al., (2005) found the amount of misperception is significantly different depending on the race of the respondent. Thus their analysis controls for respondent identity as white, black, Asian or Hispanic. In the Australian context, typical measures of race are not commonly used given the diversity of ethnic groups found in Australia (XXX, 2014). However, in order to control whether majority white Australians perceive ethnic group size differently to those of a different ethnicity, we utilise a binary variable that indicates whether the respondent primarily identifies as Caucasian/White (1) as opposed to another race or ethnicity (0).

Demographic Characteristics

Following Alba et al., (2005) and work by Cherney and Murphy (2011), we utilise a number of demographic measure to control for individual characteristics that are important to understanding a) perceived ethnic group size (Alba et al., 2005), b) perceptions of informal social control (Sampson & Wikström, 2008), and c) police cooperation (Murphy and Cherney, 2011). These include age of the respondent in years, whether the respondent was female (1) or male (0), whether the respondent was a home owner (1), if the respondent was married (1), and the number of dependent children the respondent had in their care. In addition to the binary indicator of

Caucasian/white identity discussed above, we also include a binary variable that indicates whether the respondent was Australian (1) or foreign born (0).

Educational achievement was measured across seven categories: no schooling (1), primary school, some high school, high school certificate, trade or technical diploma, college degree, and postgraduate degree (7). Annual Household income was measured across eight categories (less than \$20K (1), \$20-39,999, \$40-59,999, \$60-79,999, \$80-99,999, \$100-119,999, \$120-149,999, and \$150K or more (8)). We treat both annual household income and educational achievement as continuous measures in the regression analyses due to the number of categories in each measure.

Analysis

After excluding cases with non-usable estimates of ethnic group size, we examined the data for additional missing data. Missing data analysis revealed that missing data was not primarily clustered around specific variables but randomly missing throughout the data. We follow recommendations by Allison (2001) and excluded these cases leaving us with an overall sample size of 2861. We first analyse descriptive statistics to explore the distribution of perceptions of group size for the four ethnic groups. We compare the mean responses for each group to more accurate population estimates from 2011 census data. We use difference of means t-tests to explore whether there are significant differences in ethnic group size perceptions between white and non-white respondents. Following analyses done by Alba et al., (2005), we utilise ordinary least squares (OLS) regression models to first examine what individual characteristics are associated with misperceptions of ethnic group size for each of the four ethnic groups: Caucasian/white, Asian, Muslim and African.

Additional OLS regression models are used to look at the linear relationship between individual characteristics, contact with neighbours of a different race, and misperceptions of ethnic group size for perceived informal social control and self-reported police cooperation. Given that the variable that measures misperceptions of ethnic group size is a logged ratio, positive coefficients can be interpreted as those that are more distorted in relation to the majority Caucasian/white group

size, and negative coefficients are interpreted as being less distorted in relation to majority Caucasian/white group size.

Results

Using data from the NSPS, we first present findings on the nature of misperceptions in the Australian national sample. Second, we present findings on how misperceptions of ethnic group size are associated with perceptions of informal social control and formal social control via self-reported police cooperation.

How much Misperception?

Population parameters of ethnic group sizes in Australia were gained from the 2011 census in order to be compared to perceived ethnic groups sizes shown in Figure 1. Figure 1 shows the distributions of perceived a) White, b) Asian, c) Muslim, and d) African ethnic group sizes in Australia and the dark grey line indicates the actual census percentage of the corresponding ethnic group size. Results show that survey respondents under-perceive the percent of the majority white population by approximately 16%. Mean estimates for the perceived white majority population is 62.16%, and census data indicates that the true population of white residents in Australia is 78.18%. In contrast, survey respondents considerably overestimate estimates of minority populations. On average, survey respondents estimate that almost 20% of Australia's population is of Asian descent, while census data shows that the true Asian population is almost half that size (approximately 9%). Survey respondent estimates of Muslim population size in Australia are 12.94%, an extreme overestimation to the 2.12% reflected in Census data. Lastly, on average, estimates for the African population in Australia are 6.85%, again overestimating group size in comparison to the more realistic 2.16%. These descriptive results reflect those found in the research by Alba et al., (2005) who also survey respondents in an American national sample, indicating that whites are an endangered majority due to the underestimation of white population size. In contrast, estimates of minority groups are consistently larger than census data indicators, suggesting that respondents are overestimating the size of minority groups.

Figure 1 about here

Table 2 shows the results of difference of means t-tests between white and non-white respondents in the estimations of white, Muslim, Asian, and African populations in Australia. Only estimates of Australia's majority white population show that white and non-white estimates are statistically significant. In this case, white respondents are more likely to underestimate their own ethnic group; however, even minority group respondents under perceive the size of the majority white population. This means that underestimating the size of the majority white population is not only made by Caucasian respondents about their own race, but misperceptions across the respondents of all ethnicities, even though Caucasian respondents make this error to a larger extent. We found no significant differences between whites and non-whites in estimates of *minority* group sizes. These results are also comparable to those found by Alba et al., (2005) in an American study.

*** Table 2 about here***

Who Misperceives?

Results in Table 3 show the OLS regression results for individual characteristics and contact with diverse others on the logged ratios of Asian to majority white group sizes, Muslims to white group size, and African to white group size. For each perception of minority to majority group, respondents' age, gender and educational achievement consistently are associated with the misperception of ethnic group size.

*** Table 3 about here***

As age and educational achievement increase, respondent perceptions of ethnic group size become less distorted across all three ratios. Females are also significantly more likely to have distorted perceptions of ethnic group sizes in general than their male counterparts. In the case of Muslim to white and African to white group size estimates, educational achievement has a sizeable effect; increases in educational achievement reduces the ratio by approximately 20%. This effect is also seen for Asian to white estimates where educational achievement is associated with an 11% reduction. Gender is also significant. Across all three groups, females perceptions of ethnic group size is 40-50% more distorted than males. Age, though significant, is not a strong factor, however, and like the findings by Alba et al., (2005) older respondents are more accurate in their estimates than younger respondents. Overall, these results show that increases in age and education

contribute to less distortion in relative group size between minority and majority groups, and females are less accurate than their male counterparts when estimating relative group sizes.

Misperceptions, Perceived Informal Social Control and Willingness to Cooperate with Police

Results in Table 4 show the OLS regression results for two sets of analyses: perceptions of informal social control and police cooperation. Perceived diversity and changes in ethnic populations have commonly been linked to informal social control in a number of ways. Most notably, existing research suggests that changes or perceived changes in diversity can influence perceptions of informal social control and ultimately influence the way in which individuals interact with police as formal social control agents (Drakulich & Crutchfield, 2013), solve community problems and engage with other residents (Wilson & Traub, 2006). Ultimately, we address whether misperceiving ethnic group size is associated with perceived informal social control and self-reported willingness to cooperate with police.

The first model in table 4 shows the regression results for perceptions of informal social control. As respondent educational achievement increases, perceptions of informal social control decrease ($\beta = -0.044$, $p < 0.05$), indicating that those who are more educated have more pessimistic views of the capacity of their neighbourhood to intervene when problems occur. Age is associated with increases in perceived informal social control ($\beta = 0.150$ $p < 0.001$), and females ($\beta = 0.077$, $p < 0.001$) and respondents who are currently married ($\beta = 0.064$, $p < 0.001$) are more likely to perceive higher levels of perceived informal social control in their neighbourhoods. Respondents with dependent children are more likely to have higher perceptions of informal social control ($\beta = 0.060$, $p < 0.01$).

Perceived Muslim to white group sizes do not reach statistical significance in predicting perceptions of informal social control, however, statistically significant relationships exist for Asian to white and African to white group size perceptions. As the perceived Asian to white group size becomes more distorted, individual perceptions of informal social control decrease ($\beta = -0.131$, $p < 0.001$). In contrast, as perceived African to white groups sizes become more distorted, perceived informal social control increases ($\beta = 0.083$, $p < 0.01$). To test whether interracial contact mediates

the relationship between misperceptions and perceived informal social control, Model 2 includes a measure for a respondent's frequency of contact with neighbours of a different ethnic group. However, interracial contact is not significant in models explaining informal social control.

***Table 4 about here ***

Model 3 shows regression coefficients for police cooperation and includes perceptions of informal social control as a predictor following work by Drakulich and Crutchfield (2013). Individuals who are more likely to cooperate with police are older ($\beta = 0.105$, $p < 0.001$), female ($\beta = 0.069$, $p < 0.001$), and have higher annual household incomes ($\beta = 0.081$, $p < 0.001$). Perceived informal social control is also related to increases in police cooperation ($\beta = 0.211$, $p < 0.001$). These results also show that misperceptions are associated with attitudes towards police cooperation, but there are differences based on which ethnic group is being perceived. As perceptions of Muslim to white group size become more distorted, police cooperation increases ($\beta = 0.082$, $p < 0.05$) but as African to white group size become more distorted, police cooperation decreases ($\beta = -0.102$, $p < 0.001$). Asian to white perceptions of group size do not reach statistical significance in these models predicting police cooperation.

Model 4 includes the measure for interracial contact. Contact with a diverse set of neighbours is positively related to police cooperation ($\beta = 0.038$, $p < 0.05$), however, it does not seem to mediate any of the relationships between group size perceptions and police cooperation. Thus, it is not "correcting" misperceptions that shape attitudes and actions towards formal authorities.

Discussion/Conclusion

Similar to the research by Alba et al., (2005) the results of this study show that survey respondents overestimate the size of minority populations in Australia while underestimating the majority white composition of the Australian population. The results suggest that many survey respondents exaggerate the size of Asian, Muslim and African groups, with no significant differences between white and minority respondents in their overestimation of these minority populations. Given that census data indicators show that the majority population of Australia comprises Caucasian/white people, the overestimation of minority groups is concerning and raises questions regarding factors which might account for such misperception. Yet the results from this study

indicate that it is only increases in age and educational achievement which enhances the respondent's correct perceptions of ethnic group size.

Comparable with the study by Alba et al., (2005), the level of education was found to have a pronounced effect on correct perceptions of ethnic group size. However, even with this factor taken into account the overall misperception of ethnic group sizes indicates that many of the respondents have distorted perceptions of Australia's demography. This overestimation of minority groups in Australia is not a new phenomenon; particularly overestimations of minority groups who have had a longer history in Australia. The overestimation of population size for 'newer' less established groups such as the Asian, Muslim and African communities may reflect deeper socio-political issues within Australia. This also has implications for perceptions of social control, mainly when perceived differences in diversity affect perceptions of informal social control in terms of police-community relations (Drakulich & Crutchfield, 2013), and problem solving (Wilson & Traub, 2006). Interestingly, in contrast to research on ethnic innumeracy (Gallagher, 2003; Herda, 2010), having contact with members of a different ethnic group is not a predictor of misperception in the present study.

Contact with Ethnically Diverse Others

The results of this research indicate that contact between different race groups is associated with willingness to cooperate with police, but not perceptions of informal social control. Furthermore, we find no evidence of a mediating effect of interracial contact. Thus, interracial contact does not explain why misperceptions of particular ethnic groups are related to perceived informal social control or willingness to cooperate with formal authorities. Yet we do find that the relationship between misperceptions and willingness to cooperate with police as well as perceptions of informal social control are dependent on the ethnic group being perceived.

Research examining the link between perceptions of various minority groups and fear of crime, threat, and contact with ethnically different others, does not clearly indicate how contact with others might influence errors in perceptions or consequences of those errors. Research by Chiricos et al., (2001) suggests that living in close contact with diverse racial groups increases the perceptions that particular groups may be threatening. In line with this, Gallagher (2003) suggests that the perceived threat of a particular group has been found to explain why whites are so poor in

realistically estimating minority group size. On the other hand, having contact with others of a different race or ethnic group may cut down the reliance on exaggerated or incorrect stereotypes. It may also improve intergroup relations, interracial perceptions and improve interaction between majority group and minority group members (Drakulich, 2012; Stolle, Soroka, & Johnston, 2008).

As previously stated, interaction with people of a different race or ethnicity can inform people about race and ethnicity, which allows for the opportunity to revise negative stereotypes. Racialized anxieties associated with certain groups are likely to have considerable outcomes for different neighbourhoods (Drakulich, 2013). Previous research has found that interracial contact is only positive when it occurs under comparatively idyllic conditions (Allport, 1954). Yet we find that interracial contact is not associated with misperceptions per se, but that they are important when considering engagement with formal social control agents.

Group Specific Consequences of Misperceptions

Although our findings may be reflective of the current socio political climate regarding perceptions of Muslims and their vilification since 9/11, such levels of expectation regarding police cooperation are not indicated when it came to misperceptions of the African population. However, with the ongoing political unease regarding asylum seekers and immigration reform, misperceptions and marginalisation of the African population may increase. As such, the distortions regarding misperceptions of ethnic group size and expectation of police involvement with minority populations may well be a consequence of attitudes held towards Australian immigration policy and/or immigrant groups and attitudes in general towards other minorities. We also find that the association between misperceptions of group size and informal/formal social control vary depending on the group being (mis)perceived.

Asian to White distortions are associated with a decrease in perceived informal social control, while African to white distortions, an increase in perceived informal social control. In regards to formal social control, Muslim to white distortions increase the willingness to cooperate with police, while African to white distortions are associated with a decrease in police cooperation.

We interpret these differing directions as a contextual nuance in the socio-political context attached to the history of the specific minority group in Australia.

Asian immigrants and Australians of Asian descent have a longer history and experience of Australia than newer immigrant groups from African nations and Muslim countries more broadly. Though perceptions of Asians have a long history of negativity, their documented low involvement in crime, high educational achievement, and ability to advance their own niche market have, over time, aided in subduing harsh stereotypes, where other minority groups have become the focus of negative attention (XXX, 2014). Their longer comparative history in the Australian context may explain why misperceiving Asian to white group size is different than for the misperceptions of other minority groups. That said, Asian groups remain a focus on negative stereotypes particularly in regards to immigration policy and close associations with counter-terrorism strategies.

As previously stated, concerns over immigration have increased in Australia since the late 1990s, resulting in hostility and other forms of discrimination towards growing groups of immigrant populations (Gibson et al., 2002). The results from this study are, therefore, particularly salient given that nationalistic threat perceptions have previously been associated with anti-immigrant sentiment and prejudice, and that previous studies in Australia have indicated that racial and ethnic tensions have caused residents in many parts of the country to view changes to the ethnic composition of their communities in a negative way. The results may also help to understand attitudes, fear and behaviour in relation to expectations of police intervention when informal social controls break down, especially by those respondents whose distorted estimations of ethnic group size might be influenced by negative immigrant and race related perceptions (Alba et al., 2005).

Holmes et al., (2008) also finds mixed results when accounting for the size of different minority groups and formal social control agents. While increased size of blacks in the community are positively related to increased police expenditure, the increasing size of the Hispanic population did not yield the same result. Instead, an increasing Hispanic population had a much weaker relationship to police expenditure and that higher expenditures were found for US states closer to

the US –Mexico border. This indicates that the uptake of police resources as a way to combat racial threat may vary depending on the ethnic group perceived to be increasing. In addition, this may also indicate that reactions to racial threat may be determined by the salience of the problems perceived to be brought by the minority groups as they move into traditionally white areas.

Differing effects on informal and formal social control depending on which group is being misperceived suggests that group specific consequences of misperceptions are typically community situated, based on the stereotypes and meanings that are attached to particular people and places (Reck, 2015). People typically make judgements on others when specific instances of occurrences are easily conceptualised on a frequent basis, as well as how recently and directly the information has been encountered (Drakulich, 2012, p. 325). If individuals think that members of a certain group are more criminally dangerous, they will react fearfully when encountering members of the other group (Drakulich, 2012). In the case of perceptions of informal social control, we found that contact with ethnically different others reduces the effect that misperceptions have on perceived informal social control. In regard to police cooperation however, having contact with ethnically diverse others increases the effect of perceived relative group size and cooperation. These results indicate the complexity of the relationship between the perceived size of different minority groups and informal and formal social control, and between innumeracy and actions and attitudes, which is dependent on the type of group being estimated.

Limitations and Future Research

Though we find that misperceptions of ethnic group size is both consequential for perceived informal social control and police cooperation, survey data collection is heavily weighted towards Australian born respondents. As such, we cannot reliably investigate how misperception by those who are members of minority groups may have similar or different associations with perceptions of their community and consequences for action. In addition, due to the individual and cross-sectional nature of the data, we cannot account for real changes in ethnic group size in smaller geographic units such as city or community that may be more proximal or influential to the perceptions of

individuals. These limitations are challenges for future research in order to better understand the complex nature of misperceived ethnic group size on attitudes and actions.

In order to focus on the important contribution that perceived distortions in group size have on informal and formal social control, we have not included some important factors related to police cooperation. Cooperation with the police is enhanced when residents of a community believe that laws are enforced fairly and procedural justice mechanisms are robust in their treatment of all individuals within a society. The idea of procedural justice is that when police exercise their authority the procedures evaluated by members of the public are judged in terms of being fair by those who experience them. As such, people who perceive fair treatment are more likely than others to comply with the law and engage with police to manage crime (Tyler, 2006; Tyler, 2007). Future research should consider how actual or perceived minority group sizes help to understand why citizens choose to cooperate with police.

Influences, such as the media, residential segregation, racial stereotypes, and perception of group threat contribute to the overestimation of ethnic minorities (Gallagher, 2003). Such overestimation has an influence on the tolerance of people in regards to diversity. When individuals, as well as populations, overestimate the size of minority groups in the population, attitudes of being overrun by certain ethnic groups evolve and bigotry might follow. According to Alba et al., (2005), we can adjust the perceived distortion of the ethnic composition of the population and reduce racial prejudices by applying *corrective lenses*. There has been a long tradition of thought that education helps to prevent prejudice, however, as Alba et al., (2005) rightly point out, prejudice has persisted despite increased efforts to educate about diversity, intolerance and racial bias. Though we cannot specifically test for the political context in which the measured misperceptions in our study take place, we suggest that education about race and ethnic diversity may need to be more sensitive to the political and social context of racial groups over time.

In conclusion, our research, consistent with that of Herda (2010) and Alba et al., (2005) show that Australians have highly distorted perceptions of the size of ethnic minority groups, as well as

the majority white population. This distortion is shown in the overestimation of minority groups while underestimating the size of the majority white population. We have demonstrated that though measuring misperceptions is in itself complex, misperceptions themselves are consequential for attitudes and actions. They are, therefore, not merely errors in counting, but errors in counting that matter for real social outcomes.

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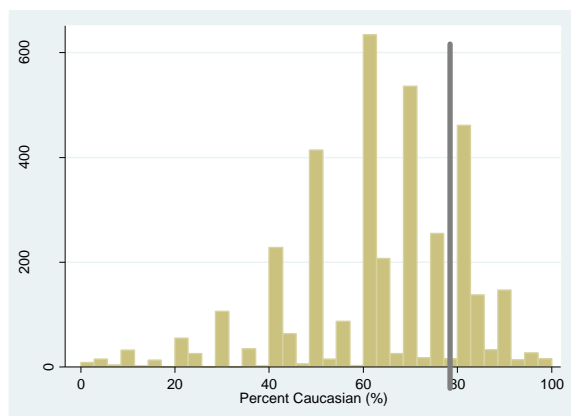
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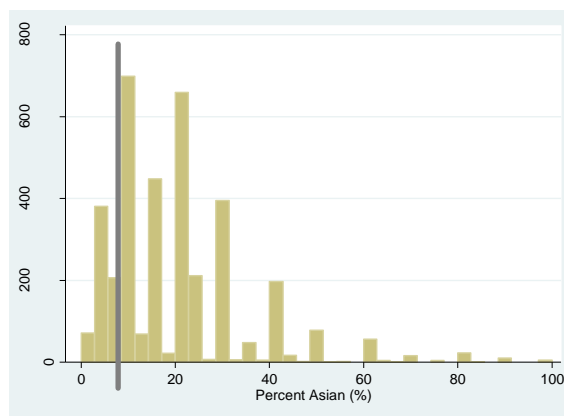
Table 1: Descriptive Statistics for the National Security and Preparedness Survey (2011/12)

	M, Md, Mo,	SD	Range	Alpha	N
Race Contact	1.64 (M)	0.53	1-3	0.85	3730
Informal Social Control Scale	3.69 (M)	0.69	1-5	0.77	3999
Police Cooperation	4.53 (M)	0.59	1-5	0.89	3969
Age in years	55.86 (M)	15.42	18-95	-	4240
Female	58.47 (%)	-	0-1	-	4257
Educational Achievement	3.04 (M)	1.33	1-8	-	3942
Annual Household Income	3.93 (M)	2.23	1-8	-	3674
Married	61.0 (%)	-	0-1	-	4047
Number of Dependent Children	0.57 (M)	0.99	0-7	-	3963
Home Owner	83.51 (%)	-	0-1	-	4257
Australian Born	78.90 (%)	-	0-1	-	4085
Respondent is African	1.33(%)	-	-	-	-
Respondent is Asian	2.18(%)				
Respondent is Muslim	0.39(%)				
Respondent is ATSI	1.02(%)				
Respondent is Caucasian	81.57 (%)	-	0-1	-	4085

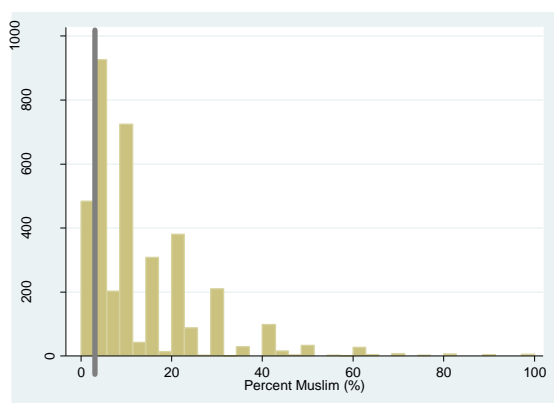
Figure 1: Perception and Reality of Ethnic Groups Sizes in Australia³



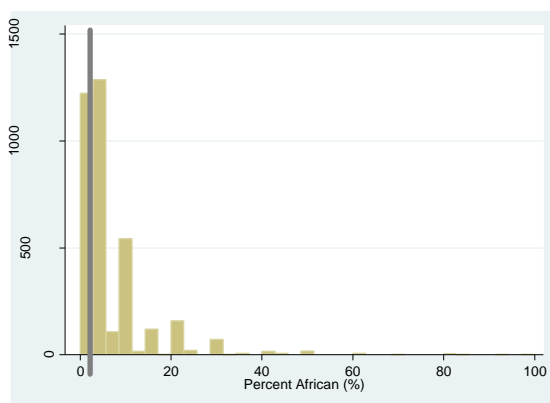
a) What percentage of the Population is Caucasian?



b) What percentage of the population is Asian?



c) What percentage of the population is Muslim?



d) What percentage of the population is African?

³ Grey line on histograms indicate percent of ethnic group reflected in the 2010 Australian Census.

Table 2: T-test Mean Group Size Estimates by White and Non Whites in Australia

	% Caucasian	% Asian	% Muslim	% African	N
Estimated by:					
Caucasians	62.31	19.77	12.94	6.95	3332
Non-Caucasian	64.01	19.83	12.93	6.41	753
t Statistic	2.19*	0.10	-0.02	-1.47	
df	3618	3616	3595	3583	

Source: National Security and Preparedness Survey 2012

Table 3: OLS Regression Coefficients for Misperceptions of Caucasian, Asian, Muslim and African Group Size

	<u>Asian to Caucasian</u>		<u>Muslim to Caucasian</u>		<u>African to Caucasian</u>	
	<i>Coef. (SE)</i>	<i>Beta</i>	<i>Coef. (SE)</i>	<i>Beta</i>	<i>Coef. (SE)</i>	<i>Beta</i>
<i>Constant</i>	-0.865*** (0.246)	.	-1.106 *** (0.297)	.	1.562*** (0.290)	.
<i>Age (in years)</i>	-0.015*** (0.001)	-0.232	-0.016*** (0.001)	-0.212	-0.017*** (0.001)	-0.218
<i>Female</i>	0.437*** (0.033)	0.221	0.545*** (0.039)	0.229	0.531*** (0.039)	0.552
<i>Educational Achievement</i>	-0.111*** (0.013)	0.144	-0.178*** (0.015)	,-0.193	-0.196*** (0.015)	-0.214
<i>Australian Born</i>	0.068 (0.102)	0.028	0.063 (0.123)	-0.021	-0.006 (0.120)	-0.002
<i>Caucasian</i>	-0.110 (0.108)	-0.043	-0.007 (0.129)	-0.002	0.039 (0.127)	0.013
<i>ATSI</i>	0.188 (0.177)	0.017	0.234 (0.215)	-0.018	0.022 (0.208)	0.001
<i>Contact with diverse others</i>	0.002 (0.031)	0.001	-0.001 (0.037)	0.001	-0.016 (0.037)	-0.007
<i>N</i>	3105		3105		3105	
<i>R Square</i>	0.129		0.139		0.149	

*p<0.05, **p<0.01, ***p<0.001

Table 4: OLS Regression Results for Perceived Informal Social Control and Police Cooperation

	<i>Perceived Informal Social Control</i>				<i>Police Cooperation</i>			
	Model 1		Model 2		Model 3		Model 4	
	Beta	SE	Beta	SE	Beta	SE	Beta	SE
Education	-0.044*	0.010	-0.054**	0.012	-0.005	0.008	-0.011	0.008
Age	0.150***	0.001	0.150***	0.001	0.105***	0.001	0.001***	0.001
Female	0.077***	0.025	0.073***	0.026	0.069***	0.021	0.068***	0.021
Married	0.064***	0.027	0.065***	0.027	0.037	0.022	0.038	0.022
Australian Born	-0.001	0.075	0.011	0.075	0.021	0.061	0.023	0.061
No. Dependent Children	0.060**	0.014	0.051*	0.014	0.005	0.011	0.006.	0.011
Household Income	0.041	0.006	0.039	0.006	0.081***	0.005	0.083***	0.005
Home Owner	0.025	0.036	0.023	0.037	-0.005	0.030	-0.003	0.030
Respondent is White	0.038	0.079	0.039	0.080	-0.015	0.065	-0.017	0.065
Ln Muslim:White	0.009	0.019	0.013	0.020	0.082*	0.015	0.095**	0.016
Ln Asian:White	-0.131***	0.023	-0.133***	0.024	0.025	0.019	0.018	0.019
Ln African:White	0.083**	0.018	0.081*	0.018	-0.102***	0.014	-0.104**	0.015
Informal Social Control					0.211***	0.014	0.204***	0.015
Contact w other Ethnicity			0.113***	0.023			0.038*	0.019
Prob > F	10.24***		12.09***		17.96***		16.36***	
Adjusted R Square	0.035		0.048		0.068		0.071	
N	2847		2847		2847		2847	

*p<0.05, **p<0.01, ***p<0.001

Appendix A: National Security and Preparedness Survey (2012) Ethnic Innumeracy Question.

Just your best guess – what percentage of the Australian Population is in each group?

Percentages don't have to add to 100 and the listed groups may overlap.

Caucasian	Asians
Aboriginal or Torres Strait Islander	Africans
Muslims	Jewish